

Work Order ID 62903

Page 1

Wednesday, October 13, 2010 9:05:48 AM

Item ID: D350-636-016

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

10-10-13

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4168	A								
IIN-D350-636	H								

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-016 CHG 001

N/A

see W263145

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____




NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries


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Page 4

Item ID:	D350-636-016	Accept		Setup	Start	
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Required Date:	10/22/2010	Req'd Qty:	1.00			
Reference:						
				Cust Item ID:		
				Customer:		

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
	HandFinish								
	Hand Finishing								
	Memo	0.00							




DP

10-11-4

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Wednesday, October 13, 2010 9:05:48 AM

Page 3



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Page 2

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				Customer:		

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
	Skidtubes								
	Skidtubes								
	Memo	0.00							
	1- Pick D2600-3 Bent								
	2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D4168								
	3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.								
	4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting								
	5- Drill fwd step holes using DT9616. Ensure proper positioning. All holes as per dwg D4168								
	6- Drill pilot holes as per Dwg D4168 sheet 5 (D4168-1 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)								
	7- Clecko DT8863B on second side of tube and drill pilot holes for detail K. ***SECOND SIDE***								
	8-Open up holes for Detail K to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D4168. Open up holes for ground handling and detail C to 0.500" (8 holes per side)								
	9-Open up holes of Detail J to 0.297" (total of 2 holes per side) +.201 iplace per side								
	10-Weld D2744 Cap as per Dwg D4168 and QSI 004. Fill grooves in bend left								

> 1

BB/10/10/14

DP 10-10-15

BE 10/10/13

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

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H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

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H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

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Wednesday, October 13, 2010 9:05:48 AM

Page 5

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side)
as per dwg D4168.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side)
as per dwg D4168.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes of Detail K,L, ground handling and float holes per dwg D4168
(welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required

7-Bond web D2739 in place as per QSI 015
A/R ☐☐☐ Sikaflex-291 batch: 116040 ☐☐☐
exp. date: 11/09/30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D4168 & QSI004
(welding instructions on sheet 8)

A/R ☐☐☐ Aluminum Rod batch: m115778

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D4168

DP 10-11-5

BB 10/11/05

BE 10/11/09
BB 10/11/11

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[illegible]

Page 6

Accept

[illegible]**Setup Start**

Stop

Abstract

Cust Item ID:

1111

Customer:

Reference:

Run Start

Stop

Operation Description

Set Up/ Run Hours

Tool ID

Tool #**Plan
Code**

**Accept
Qty**

Reject
Qty

Reject Number

**Insp.
Stamp**

11-Spot face ground handling holes section (total of 4 places per side) as per dwg D4168

BE10/11/15

12-Deburr holes

BE 10/11/15

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

180

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

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Page 7

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Required Date:	10/22/2010	Req'd Qty:	1.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00 0.00		7 M 10/11/17		1	0		
200  Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum M 11/5/09 Memo START TIME: 9:15 OVEN TEMPERATURE: 320° FINISH TIME: 9:45	0.00 0.00						1	10-11-18
210  QC Quality Control	QC3- Inspect Part Finish Memo Inspect for foreign object per QSI 024	0.00 0.00		7 M 11/01/06		1	0		

205
Hand Finishing
11.01.05

Using Work pending B#

W/A M 11/01/06 XL

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Page 8

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	HandFinishing	0.00							
HandFinish	Memo	0.00	27	M	11/01/06	1	0		
Hand Finishing	1- Install inserts as per Dwg D4168								
230	HandFinishing	0.00							
HandFinish	Memo	0.00	27	M	11/04/07	1	0		
Hand Finishing	1- Inspect for Foreign Objects								
	2- Spray inside of tube with "LPS-3" batch: 01/2								
	3- Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D4168 SIKA FLEX 241 BATCH: M118/14 EXP DATE: 11/01								
	4- assemble o-ring to plug as per dwg D3492 and apply o-ring lube A/R 55-o-ring lube batch: M114/84								
	5- Coat all exposed fasteners with "LPS Procyon" batch: 114546								

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Page 9

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Reference:

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Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

Subloc 7

QC

Memo

0.00

Quality Control

250

Pick Kit

0.00

Packaging

Memo

0.00

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

Subloc 7

QC

Memo

0.00

Quality Control

*****ensure antiseize is on AN8C21A bolts*****

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W/O:		WORK ORDER CHANGES					
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Page 10

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-636-016								
	Location: <u>25</u>								
	PPP rev: <u>PPM 6 3/45</u>								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

11/01/07 ①

OK 11/01/07

MF
11-01-07

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Page 1

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Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010


Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00


Comments: IPP rev:A 10.09.28 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3490-1 		Manufactured	No			160	Each	123.0000	4	4			
Cross Bolt Spacer													


Location	Loc Qty	Loc Code
----------	---------	----------

LG	123	
59424	3	
61217	30	
62450	90	

D3490-3 		Manufactured	No			160	Each	39.0000	4	4			
Cross Bolt Spacer													

Location	Loc Qty	Loc Code
----------	---------	----------

LG	39	
60294	1	
61218	1	
62451	37	

AN3C34A 		Purchased	No			230	Each	17.0000	1	1			
BOLT													

Location	Loc Qty	Loc Code
----------	---------	----------

ST353	17	
115767	17	

4 BE 10/11/08

4 BE 10/11/08

u/A

Dart Aerospace Ltd

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Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C36A Purchased No 230 Each 115.0000 4 4
BOLT

Location

Loc Qty

Loc Code

ST353

115

M116 522

X3

109771

10

M116 381

X1

115358

15

115518

40

115882

50

AN3C37A Purchased No 230 Each 60.0000 1 1
BOLT

Location

Loc Qty

Loc Code

ST354

60

114761

10

114801

50

AN3C42A Purchased No 230 Each 104.0000 1 1
BOLT

Location

Loc Qty

Loc Code

ST354

104

106169

4

106176

100

D3488-042 Manufactured No 230 Each 8.0000 1 1
Blade Fitting Assembly, RH

Location

Loc Qty

Loc Code

FP008

8

59643

8

Wednesday, October 13, 2010 9:05:53 AM

Shop Packet Print

Page 2

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Page 3

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Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3873-1 Manufactured No

230

Each

95.0000

7

7



Bushing



11/01/06

Location

Loc Qty

Loc Code

ST092

40

B63314

X7

62197

40

ST093

55

57615

55

D4154-041

Manufactured No

230

Each

3.0000

1

1



Wearplate Assembly



11/01/06

B62711

Location

Loc Qty

Loc Code

FG

3

62196

3

D4170-1

Manufactured No

230

Each

8.0000

4

4



Bushing



Location

Loc Qty

Loc Code

LG

8

62251

8

D4171-1

Manufactured No

230

Each

0.0000

1

1



Bushing



11/01/06

B62710

B63322 x3
B62669 x1

Wednesday, October 13, 2010 9:05:53 AM

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Start Date: 10/13/2010

Required Date: 10/22/2010



Start Qty: 1.00

Required Qty: 1.00

MS21043-3 Purchased No 230 Each 2,564.000 5 5

 Nut  11/01/07



Location Loc Qty Loc Code

FG 76
 103691 76
 ST301 2488
 111383 23
 112314 2465

NAS1149C0363R  Purchased No 230 Each 5,796.000 9 9
 Washer  11/01/07

Location Loc Qty Loc Code

ST297 5796
 113524 146
 113644 150
 113889 500
 114742 5000

NAS1515H3L Purchased No 230 Each 380.0000 4 4

 WASHER  11/01/07

Location Loc Qty Loc Code

FG 40
 102472 40
 ST277 340
 111819 94
 113362 246

Wednesday, October 13, 2010 9:05:53 AM

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Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960JD816

Purchased No

250

Each

127.0000

2

2



1/2" washer, Alum

*



M 11/6/07

Location

Loc Qty

Loc Code

ST348

127

~~11/14/07~~

X2

106043

127

D2744

Manufactured No

110

Each

14.0000

1

1



Cap



Location

Loc Qty

Loc Code

LG

14

59198

14

D2600-3-BENT

Manufactured No

110

Each

17.0000

1

1



Extrusion Bent



BE 10/19/08

Location

Loc Qty

Loc Code

LG

17

61634

7

62594

10

D2743

Manufactured No

160

Each

214.0000

8

8



Crossbolt Spacer



BB 10/10/14

Location

Loc Qty

Loc Code

LG

214

50281

10

57953

2

59111

95

61844

107

D2739

Manufactured No

160

Each

0.0000

1

1



350 I Beam



62698

1

BE 10/11/08

BB 10/11/05

Wednesday, October 13, 2010 9:05:53 AM

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Page 5

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Wednesday, October 13, 2010 9:05:53 AM

Page 6

Work Order ID: 62903

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

230

Each

4,870.000

4

4



Handwritten: 11/10/07

Insert

Location

Loc Qty

Loc Code

PK011

4870

110768

4870

Handwritten: X4

D3492-041

Manufactured

No

230

Each

17.0000

8

8



Handwritten: 11/10/07 PTO =>

Plug Assembly

Location

Loc Qty

Loc Code

FP013

17

B63444

Handwritten: X8

59114

1

61311

16

AN8C35A

Purchased

No

230

Each

30.0000

1

1



Handwritten: 11/10/07

BOLT

Location

Loc Qty

Loc Code

FP

1

110847

1

ST346

29

114442

5

115188

24

Handwritten: X1

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Page 6

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/01/07	230	Assemble with D2594-3/M61792 "O" rings	jd	11/01/07	XF		S 11/01/07

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 13, 2010 9:05:53 AM

Page 7

Work Order ID: 62903

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

85.0000

4

4



Handwritten: 11/01/07

BOLT

Location

Loc Qty

Loc Code

FG

2

103964

2

ST344

83

111649

2

114653

1

114941

75

115030

5

Handwritten: X4

MS21083C8

Purchased

No

230

Each

99.0000

1

1



Handwritten: 11/01/07

NUT

Location

Loc Qty

Loc Code

ST303

99

Handwritten: M116289

Handwritten: X1

113845

5

114934

3

115594

41

115884

50

D3631-1

Manufactured

No

230

Each

387.0000

8

8



Handwritten: 11/01/07

Washer

Location

Loc Qty

Loc Code

ST072

113

60755

113

Handwritten: X8

ST076

274

52693

206

54388

68

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Page 8

Wednesday, October 13, 2010 9:05:54 AM

Work Order ID: 62903

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L ☒ NAS1149C0332 Purchased No

230 Each 29.0000 4 4



washer

M115832



x4 11/01/06

Location

Loc Qty

Loc Code

ST245

29

107534

29

D2745 Manufactured No

230 Each 189.0000 8 8



Bushing



11/01/06

Location

Loc Qty

Loc Code

ST023

189

52311

5

59112

4

61203

76

61988

104

x8

AN960C816L ☒ NAS1149C08332 Purchased No

230 Each 0.0000 1 1



WASHER

M114915



x1 11/01/06

D3492-043 Manufactured No

230 Each 35.0000 8 8



Plug Assembly



11/01/06 PTO

Location

Loc Qty

Loc Code

FP

2

54682

2

FP013

33

1363996

x8

59117

1

59190

4

61842

28

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Page 8

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/01/07	230	Assemble with NAS1611-013 / M115812 "O" rings	HA	11/01/07	5		5 11/4/07

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Wednesday, October 13, 2010 9:05:54 AM

Page 9

Work Order ID: 62903

Parent Item: D350-636-016


Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00


Required Qty: 1.00

AN3C6A	Purchased	No	230	Each	261.0000	4	4
							
BOLT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST351	261	
-------	-----	--


<u>111982</u>	261	
---------------	-----	--

MS21043-6	Purchased	No	230	Each	634.0000	4	4
							
NUT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST301	634	
-------	-----	--

<u>112314</u>	634	
---------------	-----	--

D3493-1	Manufactured	No	250	Each	44.0000	2	2
							
Washer							


<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST062	40	
-------	----	--

<u>61672</u>	40	
--------------	----	--

ST065	4	
-------	---	--

<u>60873</u>	4	
--------------	---	--

MS21083C8	Purchased	No	250	Each	99.0000	1	2
							
NUT							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST303	99	
-------	----	--

<u>113845</u>	5	
---------------	---	--

<u>114934</u>	3	
---------------	---	--

<u>115594</u>	41	
---------------	----	--

<u>115884</u>	50	
---------------	----	--

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, October 13, 2010 9:05:54 AM

Page 10

Work Order ID: 62903

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 10/13/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased No

250

Each

53.0000

2

2



11/01/08

BOLT

Location

Loc Qty

Loc Code

ST345

53

113558

1

114653

12

115723

40

12

D2741

Manufactured No

250

Each

35.0000

1

1



Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST466

35

60210

35

11/01/06

1

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Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D4168-041	350 SKIDTUBE ASSEMBLY, LH
	X			D4168-042	350 SKIDTUBE ASSEMBLY, RH
		X		D4168-043	350 SKIDTUBE ASSEMBLY, LH
			X	D4168-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
8	8	8	8	D3631-1	WASHER
7	7	7	7	D3873-1	BUSHING
1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
1				D4168-1	SKIDTUBE WELDMENT, LH
	1			D4168-2	SKIDTUBE WELDMENT, RH
		1		D4168-3	SKIDTUBE WELDMENT, LH
			1	D4168-4	SKIDTUBE WELDMENT, RH
4	4	4	4	D4170-1	SPACER
1	1	1	1	D4171-1	BUSHING
4	4	4	4	ALS4-1032-225	INSERT
4	4	4	4	AN3C6A	BOLT
1	1	1	1	AN3C34A	BOLT
4	4	4	4	AN3C36A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
9	9	9	9	AN960C10	WASHER (OR NAS1149CO363R)
4	4	4	4	AN960C10L	WASHER (OR NAS1149CO332R)
1	1	1	1	AN960C816L	WASHER (OR NAS1149CO832R)
5	5	5	5	MS21043-3	NUT
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D4168-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
 - POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
 - BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D4168-041/-042/-043/-044 = 32.3 LBS
- WELD PER DART QSI 004
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
 - MINIMUM YIELD TENSILE STRENGTH = 35 KSI
 - MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
- POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SECRET
 REF ID: A66666
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT: 350 SKIDTUBE ASSEMBLY
 WITH: 10-10-03
 WORK ON: 10-10-03
 NO. 62903

PS10-10-03

RELEASED
 2010-09-15

A NEW ISSUE		SC	10.08.09
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4168	SHEET 1 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	10.08.09	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Dart Aerospace Ltd

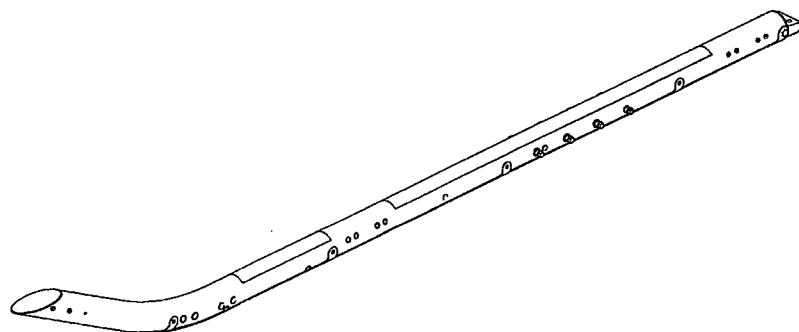
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

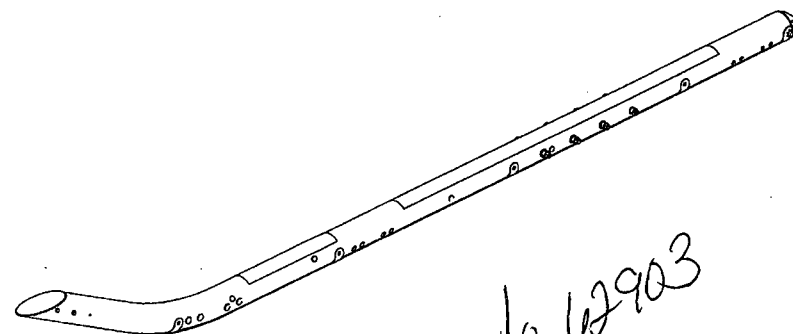
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4168-041 350 SKIDTUBE ASSEMBLY, LH



D4168-042 350 SKIDTUBE ASSEMBLY, RH

w/o 62903

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2010-09-15
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DESIGN	SC	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	SC		
CHECKED	<i>[Signature]</i>	DRAWING NO. D4168	REV. A
MFG. APPR.	<i>[Signature]</i>	SHEET 2 OF 11	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	350 SKIDTUBE ASSEMBLY	NTS
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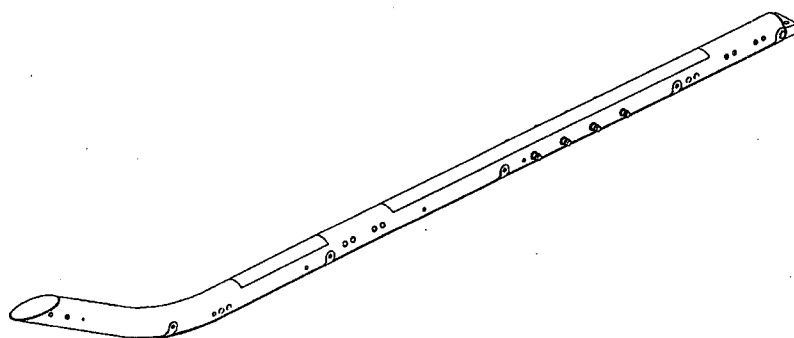
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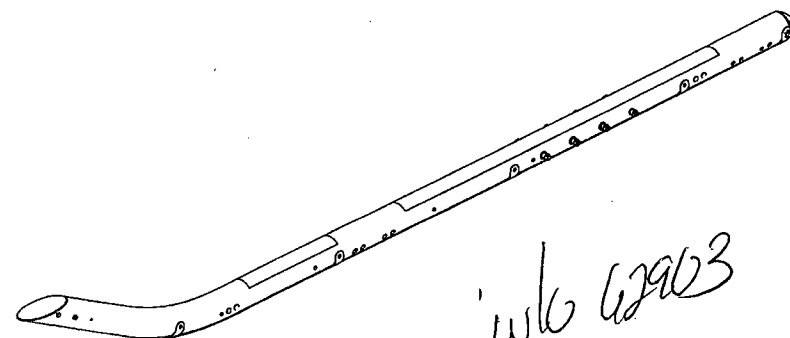
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4168-043 350 SKIDTUBE ASSEMBLY, LH



D4168-044 350 SKIDTUBE ASSEMBLY, RH

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2010-09-15

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CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4168	SHEET 3 OF 11
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	350 SKIDTUBE ASSEMBLY	NTS
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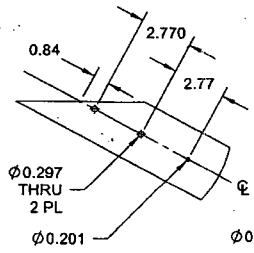
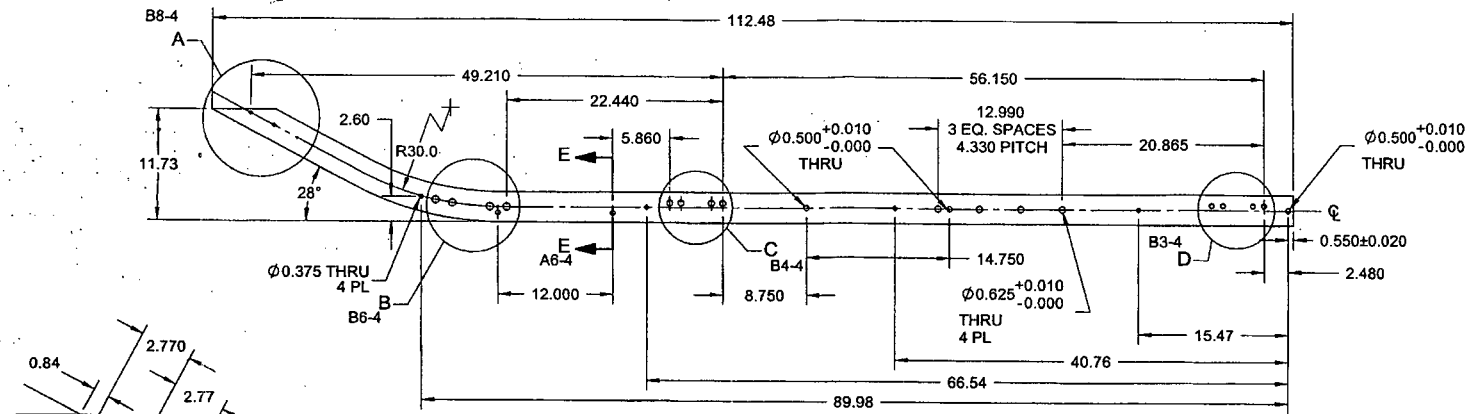
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

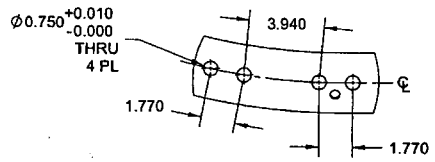
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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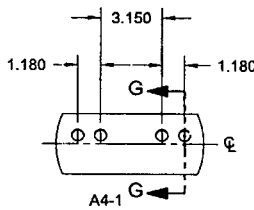
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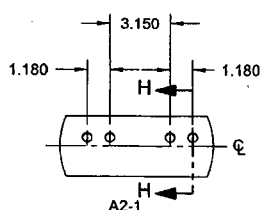
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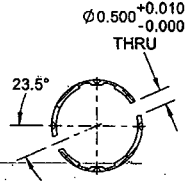
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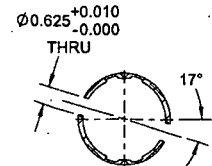
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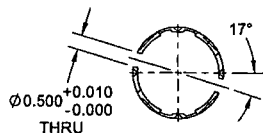
DETAIL D
SCALE 2X



SECTION E-E
SCALE 3X, 2 PL







SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

u662903

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2010-09-15

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4168	SHEET 4 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	10.08.09	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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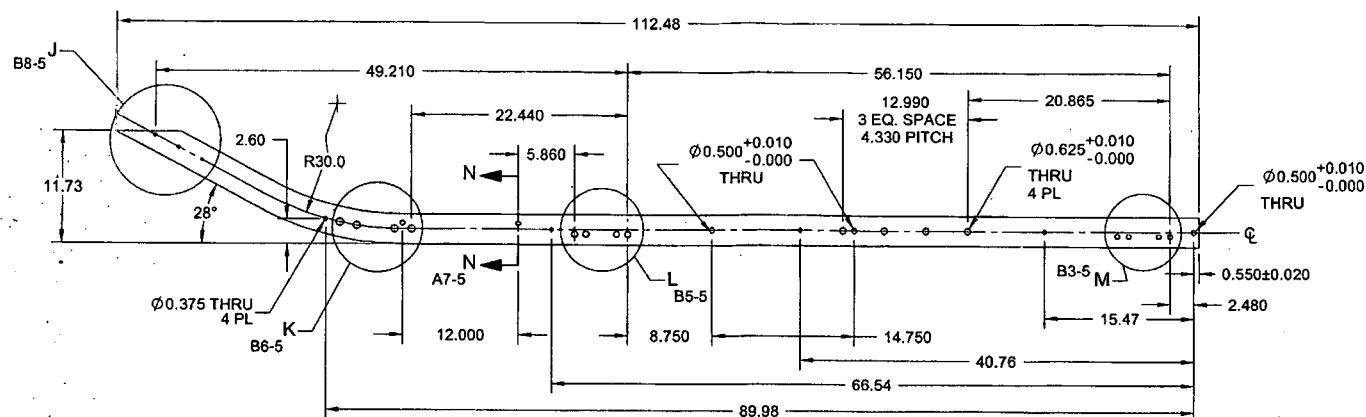
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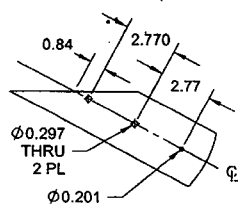
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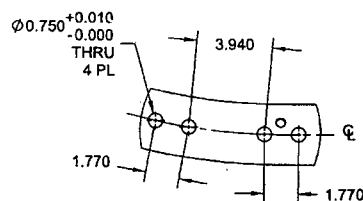
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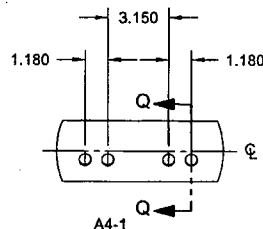
D4168-2 RH SKIDTUBE



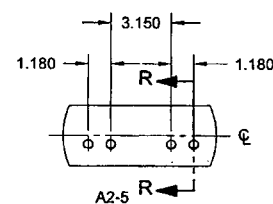
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SCALE 2X



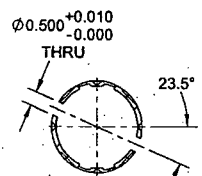
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SCALE 2X



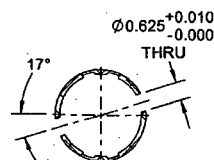
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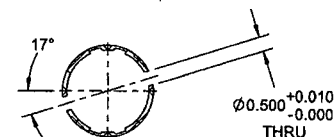
DETAIL M
SCALE 2X



SECTION N-N
SCALE 3X, 2 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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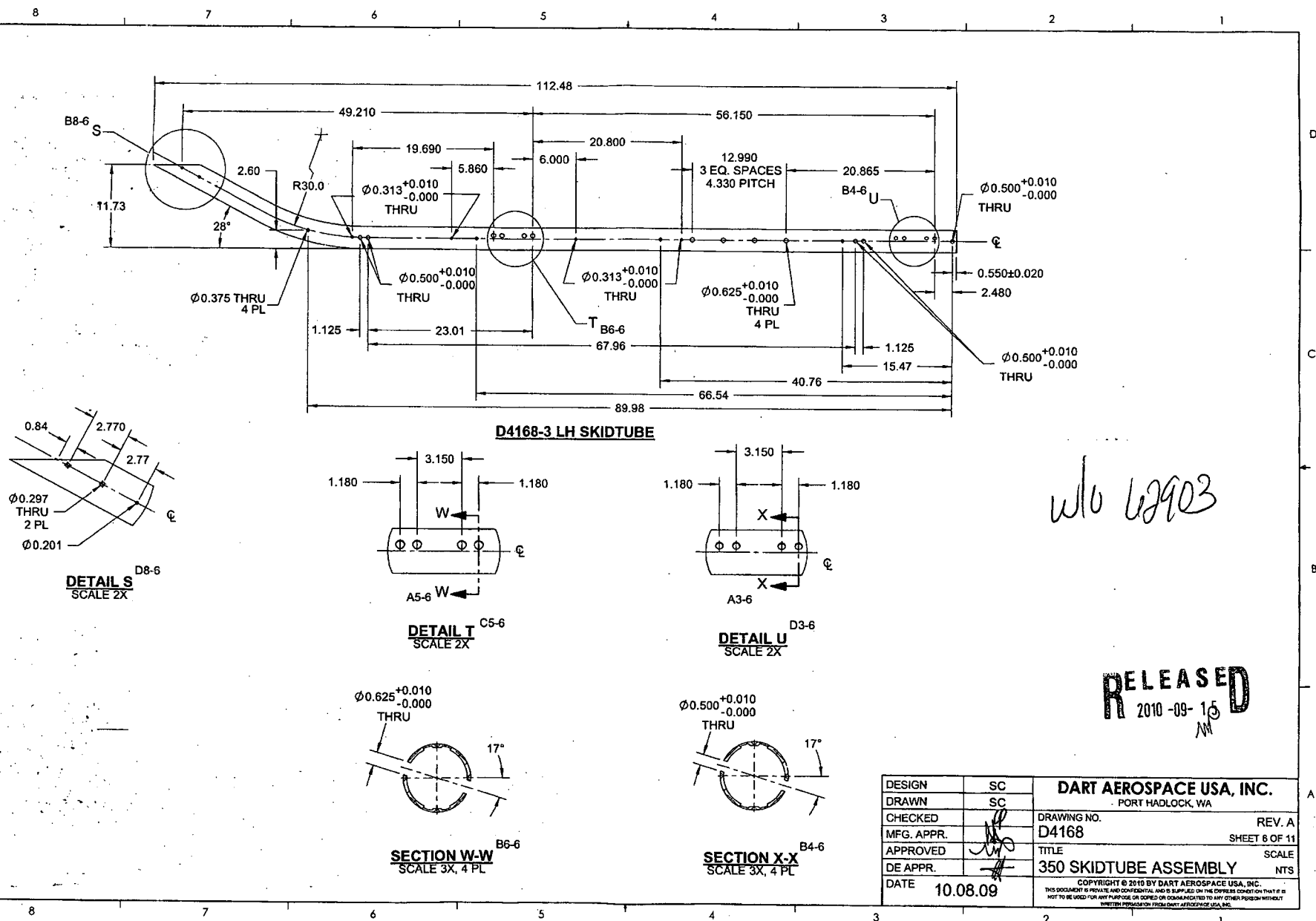
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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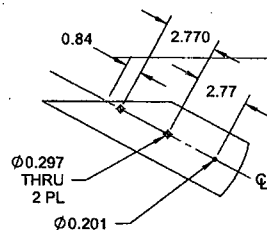
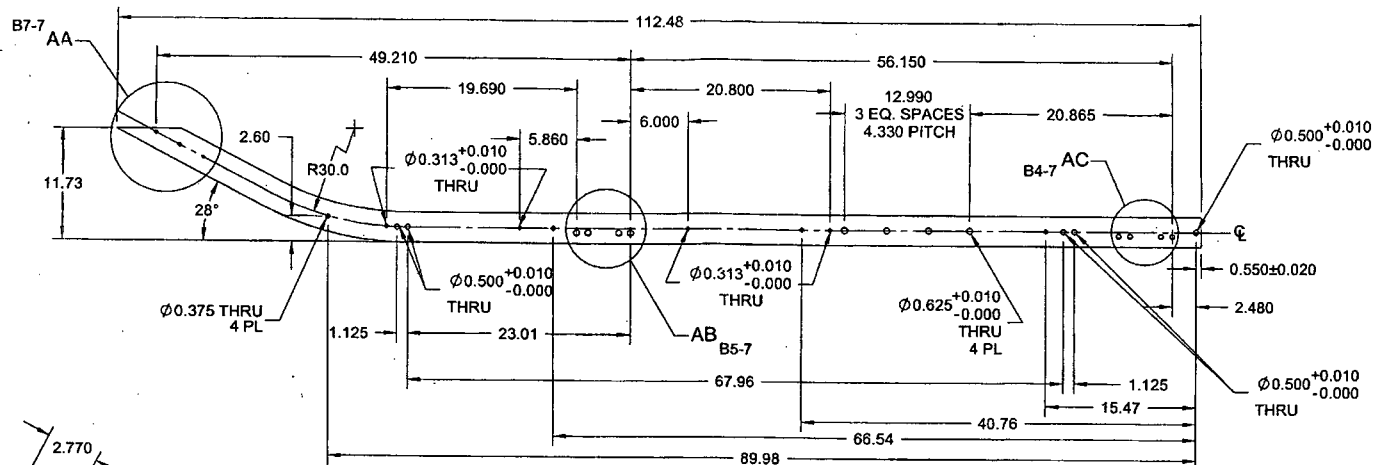
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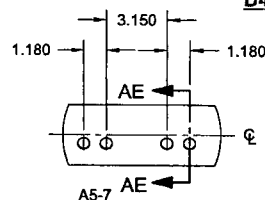
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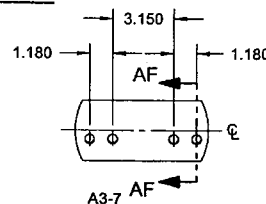
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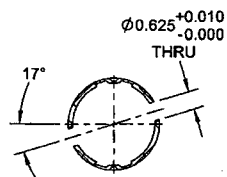
DETAIL AA
SCALE 2X
D7-7



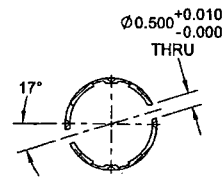
DETAIL AB
SCALE 2X
C4-7



DETAIL AC
SCALE 2X
D3-7






SECTION AE-AE
SCALE 3X, 4 PL
B6-7



SECTION AF-AF
SCALE 3X, 4 PL
B4-7

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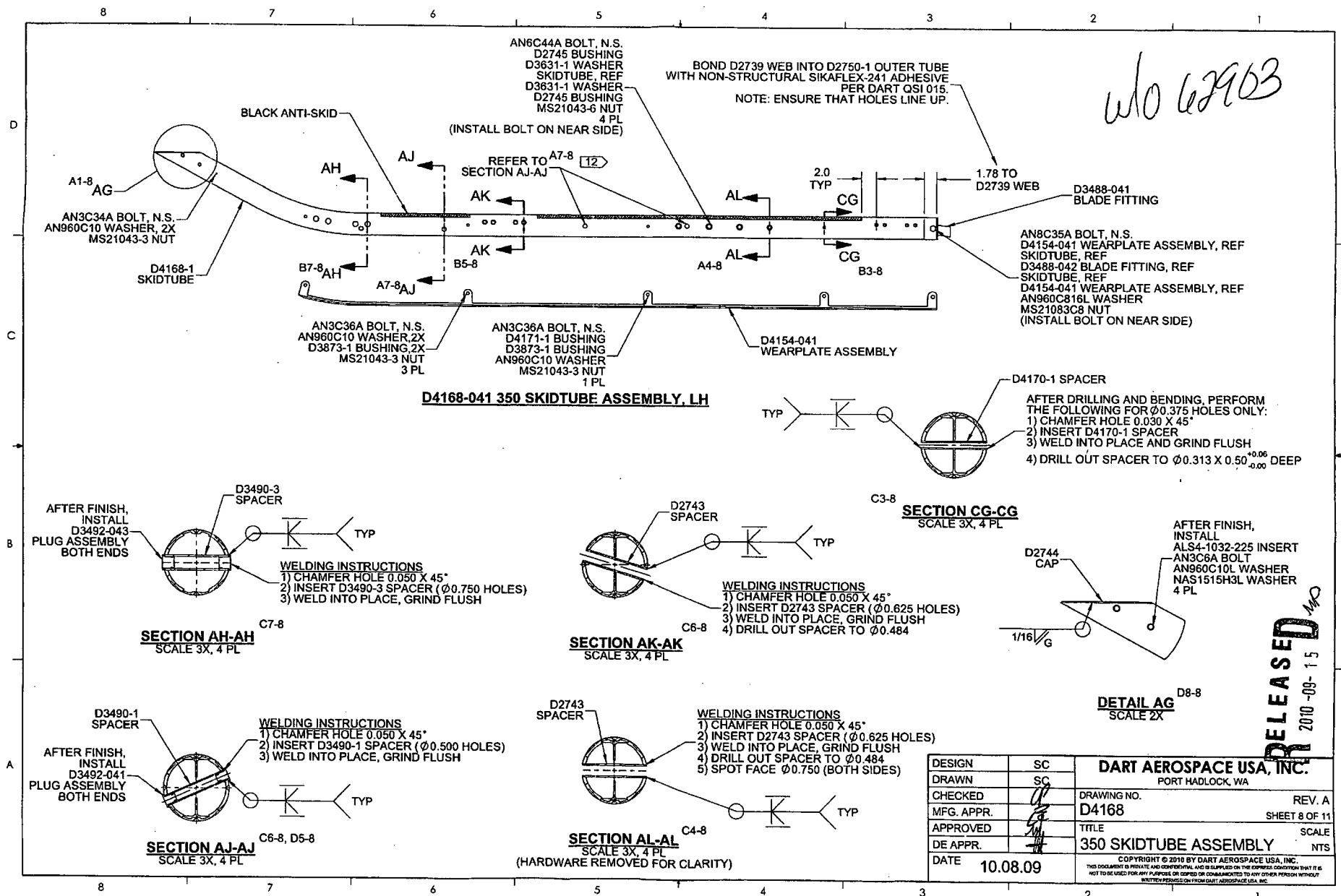
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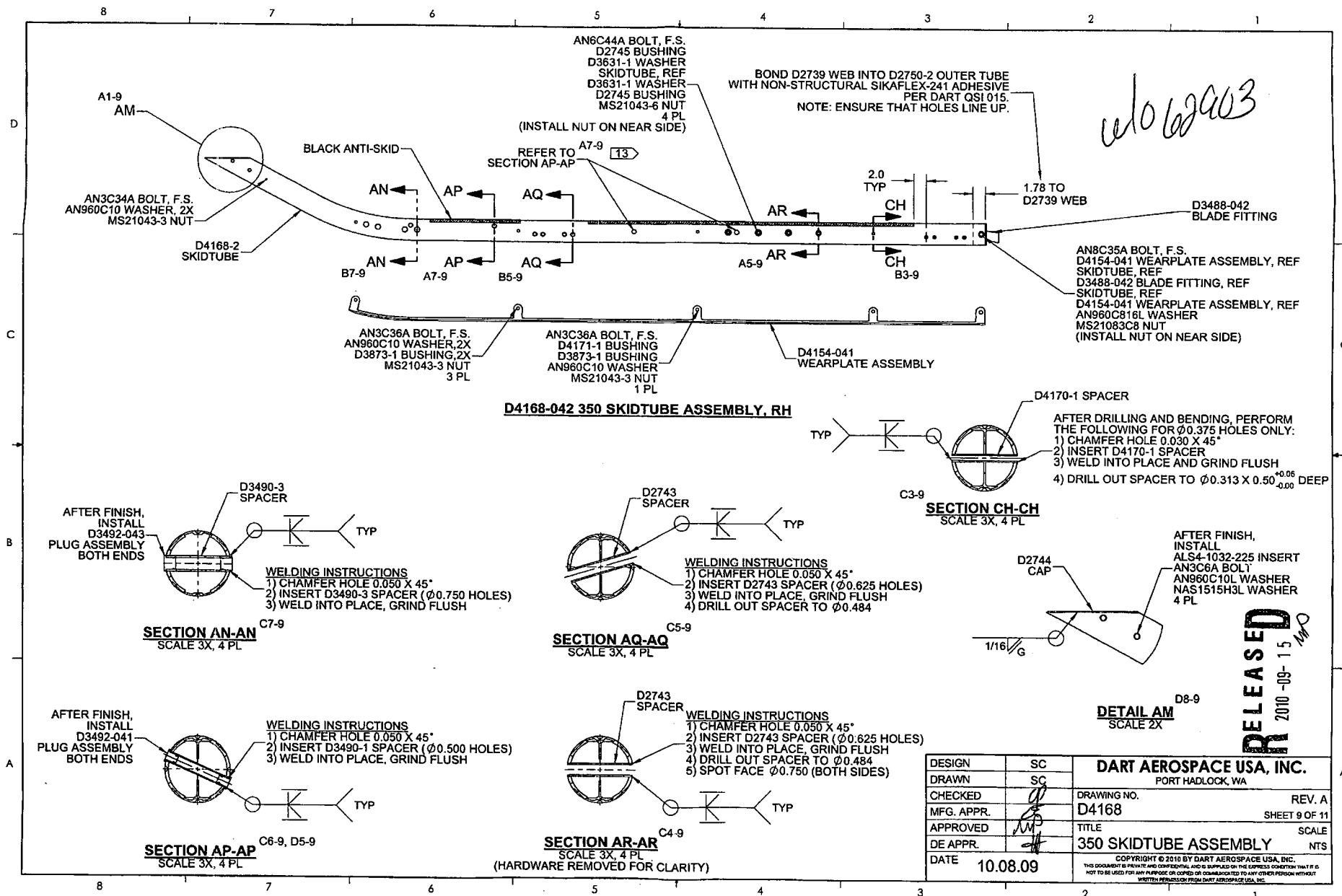
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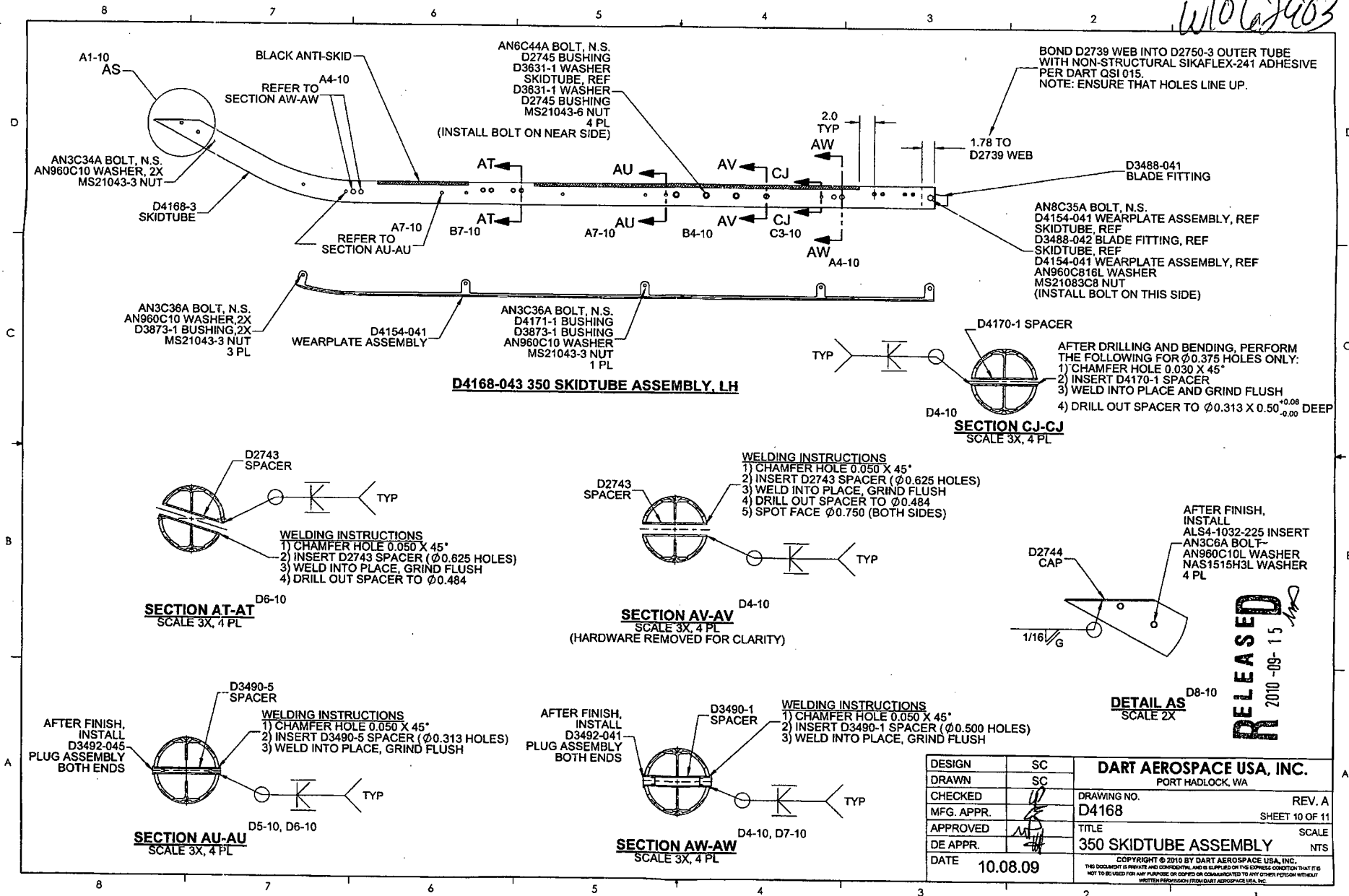
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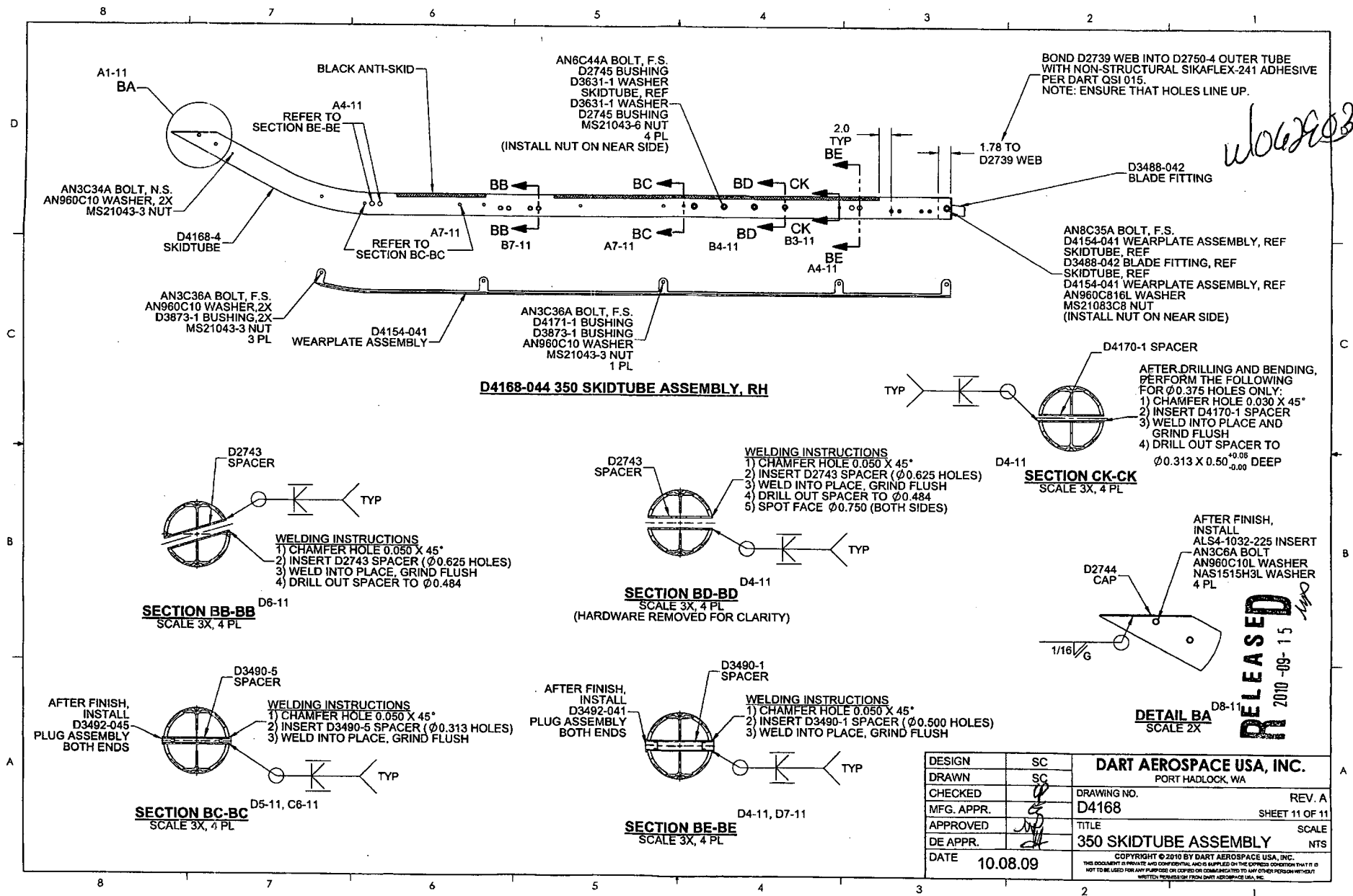
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